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ECONOMIC CONDITIONS CAUSING THE TWO-DAY CATTLE MARKET AT CHICAGO AND THE EFFECT OF THE ZONING LAW.

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It is now approximately three and one half years since the Food Administration put into effect its zoning order "to establish greater regularity for the movement of live-stock shipments and arrivals at Chicago." By the original order, issued on December 10, 1917, all live-stock producing territory tributary to the Union Stock Yards was divided into two zones; the first to include, roughly speaking, territory lying within 175 miles of the yards; the second zone taking in all territory lying outside the first-zone boundary up to and including shipping points within the thirty-six-hour scheduled runs covering live freight directed toward Chicago. The order was made so that shippers within the first zone could load live stock to arrive at Chicago for Tuesday, Thursday, Friday and Saturday markets, while those in the second zone could only load to arrive at the yards on Monday, Wednesday, Friday and Saturday. Although this original order has not yet been revoked, it has been revised and modified from time to time until now, in the instance of a few of the smaller roads supplying Chicago with live stock, it has ceased to function. However, most of the roads touched by this order are attempting, in so far as they are able, to comply with the system.

Just what were the conditions on the Chicago market prior to the time this zoning went into effect? In the year 1916 over seventy-five percent of the cattle business in this great market was turned on two days of the week, or approximately 375 millions of the 509 million dollars' worth of live-stock tickets changed hands on Mondays and Wednesdays. Now, the transaction of the remaining 125 million dollars' worth of business during the rest of the week was of no small moment; but surely there should be found reasonable cause for a practice which in 1916 drove three times as many cattle over the Chicago scales on Monday and Wednesday as crossed on the four remaining "light days" of the week. And I think as we go into the conditions surrounding the marketing of cattle just before the war we will find that this practice grew out of the adjustments of those agencies con-

nected with the marketing of live stock to the natural forces at work in the cattle industry during the rapid growth of centralized markets since 1885. Let us go back and touch briefly the history of the establishment and development of live-stock markets and carry this history down to the year 1916, dwelling upon some of the natural and economic causes which resulted in the congestion of the Chicago cattle market on Mondays and Wednesdays.

Forces Causing Two-Day Market.

Prior to the 80's, that period in our marketing development marked by the rapid expansion in the use of the refrigerator car, Chicago's chief functions lay in furnishing feed and water to the producer who was speculative enough to chance his year's work and worry to the cattle car between the Chicago yards and the killing sheds of the Atlantic coast, and also in supplying a concentration point where cattle buyers from the canneries of the New England States could assemble and buy thin cattle. In those early times no discrimination, as to days of the week, was made by the ranchman for unloading at the Chicago chutes, for when it came time to move his cattle toward market the big end of his job lay in getting his drove out of the southwestern plains and north to the Missouri Valley shipping points, by trailing them for hundreds of miles through days and nights fraught with many hardships and marked by running battles with bands of outlaws. But as the railroads gradually extended their trackage to the south and west, and with this extension better freight schedules for live stock were offered, the cattleman's problems of moving disappeared, and in their stead grew the practice of letting cattle go in on the days of "strong" demand until the producer came to be blamed by the railroads for demanding Chicago service upon Monday and Wednesday and neglecting to fill schedules upon other days of the week. It was hard for the shipper to disregard Monday and Wednesday conditions when he believed that his offerings were put into a wider field of competition on these days.

And so we are brought to consider the second great force, unconsciously operating to maintain a two-day market—the great body of buying agencies. On all produce markets and exchanges Monday is dubbed the steady to strong day; why so is probably beyond explanation. Under normal conditions in market and mercantile circles, Monday exhibits a freshened start, a possible result of the opportunity afforded by Sunday to think things over. Whatever be the explanation, Monday gradually came to mean a good day to make the yards.

The feeder was not slow to see this when once the experience was realized and Monday found more cattle trying to get into the Chicago yards than could be handled effectively. Hence Tuesday began to see pens filled with left-overs. The spatterings of hard-looking left-overs hurt the Tuesday trade, caused a bearish market all around and taught the shippers to leave Tuesday alone. By Wednesday the "old stuff" was gone and the packers were busy again, at least in comparison to the day before. Tuesday and Thursday gradually lost in favor before the activities of Monday and Wednesday. Order buyers, export buyers, kosher buyers and others learned to wait for Monday and Wednesday. These, early, came to be known as "loading-out" days. Some buyers became inactive the rest of the week, reducing the competition of the market. Conditions had gradually resulted compelling the packers to buy long Monday and Wednesday as advance car reports would indicate light receipts for the days following. Packing plants must be kept busy, and to assure this packers were heavy buyers on the heavy days as a measure of safety.

While the great body of producers at one end and the fraternity of buyers at the other were adjusting themselves to a two-day market, the railroads were experiencing the pressure of economic forces which they felt justified the two-day runs. All the early centralized stock yards were located and fostered by the railroads to fill the increasing needs and purposes of a convenient place to bring together and display visible and possible future live-stock tonnage. The machinery of the live-stock trade was naturally attracted to the market places of the railroads, and buyers, traders, speculators and others began to confine their operations to centralized points maintained by the railroads until there grew to be such a demand for stock at these points that the railroads were no longer confronted with creating demand, but rather with supplying car service for agencies which were now sustaining demand, at the same time requiring speedy and efficient service in order to exist and carry on business.

Dead Freight Has Increased Faster than Live Tonnage.

During the early eighties the railroads had a very difficult job on their hands maintaining loading facilities at strategic points along the trails from the southwest, practically putting themselves into bankruptcy in attempting to render cattle-car service with rates to the east so much better than their competitors that ranchmen would go out of their way to benefit by the service. At the time John B. Sherman managed to get the railroads pulling together and started the old Bull's

Head Market few anticipated Chicago would become the vast railroad center it is today. Prior to the nineties Chicago was not a heavy rail terminal for the products of the mines, forests and factories which lay to the south and west. The cattle car in those days constituted a far more important share of her tonnage. Of all tonnage entering Chicago by rail in 1885 approximately 27 percent was brought in by stock cars; today the fifteen principal railway systems supplying Chicago with animal shipments carry but 5¼ percent of their tonnage as live freight; the products of mines make up 42 percent, manufacture 20 percent, farm products, other than live stock, 16 percent, while lumber and miscellaneous tonnage makes up the balance.

The relative decline in live tonnage entering Chicago has not been due entirely to the exploitation and development of the resources of mines, factories and forests, but has been caused in marked degree by the rapid growth of stock yards along the Missouri valley, where a barrier of markets has been developed which absorbs a great tonnage of live freight that earlier found its way into Chicago. Since 1890 these markets in the Missouri valley, together with those of the Corn Belt States other than Chicago, have increased their receipts four hundred times. Where previously there existed loading stations for cattle bound Chicagoward, today there are maintained a score of packing houses which absorb the live tonnage and produce in its stead those products which use the refrigerator car in their journey eastward to the centers of consumption.

Chicago in her strategic position at the southern extremity of Lake Michigan stands as a sort of flood-gate to catch all streams of commerce in their flow eastward to the principal center of consumption and export. Present conditions in eastward traffic show that all paths of eastbound freight passing the Mississippi and Great Lakes area converge at Chicago, save the one route which leads eastward from the St. Louis territory. Omaha is fed by one stream of commerce leading in from the northwest; Kansas City takes care of three, one leading from the same territory as that tapped by Omaha, a second from the southwest and a third from Texas. Chicago absorbs the combined tonnage of the Kansas City streams after they are assembled into one continuous flow, a second from Omaha, a third from the northwest, a fourth from New Orleans and a fifth from the eastern Gulf States.

Expansion of Track Mileage Necessitates Reducing Light Hauls.

Let us leave the markets at this point and go out along the railways to observe changes in the amount and distribution of live-stock ton-

nage. In the twenty-one States touched by the five leading Chicago live-stock roads there were, in 1875, only 77,000 miles of steam-road trackage over which to operate live-stock schedules; in 1916 there were 154,000 miles. While the tonnage of live stock increased in these twenty-one States during this time, it did not keep pace with the expansion in railroad construction. Taking the animals on farms January 1 in these twenty-one States at each ten-year period beginning with 1875, and considering 20 cattle, 120 sheep and 70 swine as each constituting a single deck, and then by distributing the total single decks of stock on farms over the miles of steam road in operation there is shown to be a decrease from 23.1 decks per mile in 1875 to 17.6 decks in 1915, a decrease of 21.8 per cent in the number of decks of live stock per mile of railroad.

January 1	1875.	1885.	1895.	1905.	1915.
Total single decks per mile	23.1	24.8	20.0	21.2	17.6
Percent of marketed live stock going to Chicago	79.7	60.2	48.5	37.3	29.5
Number of decks per mile for Chicago to draw from	18.4	14.9	9.7	7.9	5.2

Since 1875 there have been stock yards in these twenty-one States that have taken a share of the total decks away from Chicago. In the year 1875, in these twenty-one States, 79.7 percent of the live-stock tonnage put on cars went to Chicago, while in 1915 only 29.5 percent was marketed there, the rest went into the Missouri valley points and other centralized yards in the Corn Belt. That is, of the 17.6 single decks of live stock on farms per mile of railroad January 1, 1915, only 29.5 percent, or 5.2 decks per mile, were left to supply Chicago.

The accompanying chart shows that, until other markets in the middle west began their rapid growth, Chicago's cattle receipts were evenly distributed over the first five days of the week. By 1895 the newly developed outside slaughtering centers were receiving more tonnage in the form of live animals than was Chicago. In 1905 Chicago's share of all live-stock tonnage received at the eight principal markets of the middle west had dropped to about 37 percent, and by 1915 she was receiving but approximately 30 percent. It was during the period from 1890 up to the opening of the war that the railroads were increasing the carrying capacities of both engines and rolling stock to cope with the increase in freight traffic. By 1915, when the cattle car made up but a fraction over five percent of Chicago's tonnage, it became increasingly difficult for the railroads to spread their Chicago live freight over the week and still place and hold this traffic within

their tonnage system. There was a gradual holding back in making up trains for the Chicago divisions until the load volume reached the minimum governed by tonnage orders coming from traffic headquarters. From this practice finally grew the discontinuing of daily live-stock schedules over the small branch or "feeder" lines and the arranging of these pick-up schedules upon days which would insure necessary train-load capacity on trunk lines. As the farmers were already favoring Monday and Wednesday, it was very natural that schedules were arranged so that they could make these markets.

Zoning of Producing Territory Showing Beneficial Effect.

It was with the thought of remedying this two-day, heavy-volume traffic at the Chicago end of the lines that the Food Administration requested the railroads to keep their two-day schedules, but not use the same two days over their whole system. Zones were made at the Kansas City market by drawing imaginary lines out from the market cutting the producing territory into sections. But with the Chicago market, as most of her live-stock traffic comes from the west and southwest, zoning was thought more workable if it divided the short-haul Chicago traffic from the long-haul. The effects of the order were at once apparent. Monday's quota the first year was reduced from 42.4 to 30.0 percent of the weekly receipts, and Wednesday received 14.0 percent where in 1915 her share was 33.4 percent. Tuesday's share was, on the other hand, increased from 10.0 percent to 22.3, and Thursday's and Friday's part were more than doubled.

While the zoning order reduced the fluctuations in receipts and spread them more evenly over the first five days of the week, was it influential in reducing price fluctuations? General price movements are not caused entirely by fluctuations in supply, but are governed fully as much by demand. It is therefore difficult to compare the price fluctuations one year with another without knowledge of general price movements due to demand. During 1919 the cattle market made three general upward and three downward price movements; in 1917, the year before zoning had become effective, there was a general upward movement until September, and then a gradual decline over the last three months of the year. Despite the fact that the price movement made more changes in 1919, a careful study of daily prices shows that there were fully four to five percent more "steady" days in 1919 than in 1917. This would seem to indicate that the distribution of receipts throughout the week had a very beneficial effect in reducing daily fluctuations in prices.

And it would seem that the live-stock producer was not slow in noticing improvements worked by the new order of things for more live tonnage began going toward Chicago. As pointed out above, Chicago's share of live-stock tonnage received at the eight principal middle-western centralized markets had gradually decreased until in 1915 she was receiving but 29.5 percent. In 1918, the first year under the zone order, this percentage jumped to 34.3.

Chicago's Share of Live-Stock Tonnage Marketed at the Eight Principal Middle-Western Yards, Shown in Percentages.

1915.	1916.	1918.	1919.	1920.
29.5	31.2	34.3	32.1	31.0

It would appear, however, that Chicago is beginning to drop back to where she absorbs about 30 percent of the animal tonnage going to market in the middle west. This dropping off is due principally to the sharp decline in the winter feeding of stocker animals in the Corn Belt during 1919 and 1920, when at the same time lack of moisture on the range drove many thousands of cattle and sheep into the Missouri valley markets.

Live-stock producers no longer entertain the belief that allotting their stock to certain days in the week works a hardship upon them, for now no one or two days are better than the others. The railroads are finding it difficult to adhere strictly to the order, but they are finding upon the other hand less delays in unloading at the yards and fewer claims to pay. The Chicago market has been relieved of the two-day market, fluctuations from day to day have been reduced, and Chicago's receipts, if anything, have increased relatively over what might have been looked for under the economic conditions influencing the fattening of live stock in territory tributary to her yards.